

Appl. No. 09/991,308

Am't. dated July 10, 2006

Reply to Office Action of April 19, 2006

Atty. Ref. 81800.0172

Customer No. 26021

Remarks/Arguments

Reconsideration of this application is requested.

Request for Continued Examination (RCE)

A request for continued examination (RCE) is enclosed with this amendment in response to the final Office Action mailed on April 19, 2006.

Claim Status

Claims 1-10 and 13-20 were previously presented. Claims 1 and 16 are amended. Claims 3-6, 13, 18 and 19 are canceled, without prejudice, since their limitations are now incorporated in independent claims 1 and 16. Claims 1, 2, 7-10, 14-17 and 20 are now pending.

Claim Rejections - 35 USC 103

Claim 1-4 and 15-18 are rejected under 35 USC 103(a) as obvious over Morikawa (US 6,041,165) in view of Ikuo (JP 09352379). Claims 5 and 6 are rejected as obvious over Morikawa in view of Ikuo and Shibaki (US 5,724,490). Claims 7-10 and 20 are rejected as obvious over Morikawa in view of Ikuo and Katsumasa (JP 05162008). Claim 13 is rejected as obvious over Morikawa in view of Ikuo and Mastubra (US 5,920,744). Claim 14 is rejected as obvious over Morikawa in view of Ikuo and Rikima (US 5,918,088).

In response, independent claims 1 and 16 are amended to clearly distinguish over the cited references. In particular, claims 1 and 16, as amended, recite the following features:

- *a first control mode, wherein when images of two pages that are in relationship of a front page and a back page are stored in the image memory, and regardless of receiving order, the images of the two pages are recorded on both sides of a sheet by the recording unit and are erased from the image memory, wherein the first control mode is selected by the control unit when free space is less than a predetermined amount;*

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- *a second control mode in which both-side recording is started after receiving of images of all pages has been completed, wherein the second control mode is selected by the control unit when free space is more than the predetermined amount.*

By selective and automatically moving between the first control mode, where both-side recording is dynamically carried out and memory incrementally freed as matching front and back pages are received and, and the second control mode, where both-side recording does not start until all pages are received and stored, the available memory resources are effectively utilized. When there is a great deal of memory available or the document received is small, waiting for the receipt of all images before beginning both-side recording allows the pages to be printed in proper order. However, where little memory is available or a large document is received, it may be preferable to print both-side documents as soon as possible, even if out of order, in order to keep as much memory free as possible on an on-going basis.

The Action acknowledges that Morikawa and Ikuo do not teach controlling the print mode as claimed based on available memory, but asserts that such teaching is provided by Shibaki. Applicant respectfully disagrees. The cited passage of Shibaki, col. 8 lines 10-26, states, in pertinent part:

...The original images *are sequentially stored* in the page memory block 302 (S402). Whether all the original images are stored is checked (S403). If the page memory block becomes full before all the images are stored (S405), only portions of the original images which can be printed (these original images are synthesized if necessary) are printed on sheets as image formation media and output by the printer 315 (S406). Only the printed original images are erased from the page memory block, and unprinted original images are left behind...

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Thus, Shibaki merely teaches that images received are sequentially stored, and that when the memory becomes full, as many of the images as possible (presumably those in the proper sequence) are printed. Shibaki does not teach, as required by applicant's claims, that when the available memory becomes less than a certain amount, that a dynamic mode is entered into wherein matching front and back pages are printed as soon as possible on the fly, and even if this causes the pages to be discharged out of order ("regardless of receiving order"). See, for example, applicant's paragraph [0036], which notes that it may be desirable to discharge recorded pages as soon as possible, even if out of order, in order to conserve memory resources. To the contrary, Shibaki waits until the memory is completely exhausted and then, prints only the pages that are in the proper sequential order.

Katsumasa is cited for its relevance to reading originals with an image and ignoring originals without an image. Mastubra is cited for its relevance to the erasing of images from a memory. Rikima is cited for its relevance to the size of a received image. None of these references cure the deficiencies of Morikawa, Ikuo and Shibaki, with respect to the claim limitation at issue.

For these reasons, claims 1 and 16 are not obvious over the references of record. The rejections of claims 1 and 16, as well as the rejections of claims 2, 7-10, 14, 15, 17 and 20 depending therefrom, should be withdrawn.

Conclusion

This application is now believed to be in condition for allowance. The examiner is invited to telephone the undersigned to resolve any issues that remain after entry of this amendment.

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Any fees due with this response may be charged to our Deposit Account No.
50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: July 10, 2006

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